565 and, second, they are dealing with a woman who submits to their
567 caprices more easily than a woman of their race and whom they can
595 change at will. Children born of these concubinages are free but are
not members of their father's class. The latter recognizes them as
[428] his, but they are morally considered slaves. However, they can
inherit from their father.

565 /171/ Tuareg women of the noble class who have relations with
833 the Iklan are discredited among their own people. But the case is
558 not very rare, it seems, particularly since a legend maintains that
[842] the relations between Imochar women and captives are sterile.

867 The Iklan have very corrupt mores and practice pederasty and
[838 other vices. To steal and lie is instinctive for them, defects found
679] for that matter in most of the Sudanese Negroes.

Thus, when they keep goats in the pasture, they are accustomed
● [272] to sucking them. Therefore, in some camps they never receive any
milk since it is rightfully presumed that they have served themselves
304 first. Some masters, to protect themselves from these thefts, do not
234 hesitate to padlock the mouths of the herdsmen by perforating their
lips. A few years ago, there was still an old woman in the Ahaggar
who had suffered this mutilation.

They live very familiarly with their masters, and some have
deserved their confidence, either by their intelligence or by their
[644] courage during raids. The former aménokal of the Ahaggar, Moussa
ag Amastan, was always accompanied by his Negro Chernach, and
the feats of war that they accomplished together are still the object
of the most marvelous tales during camp nights.

567 A slave may ask to change masters when he is mistreated or
685 when he hopes for more advantages. Since the Tuareg generally
does not want to be separated from his slave with no recompense,
the slave resorts to a subterfuge which consists in cutting off the ear
of an animal from the herd of the master to whom he wishes
henceforth to belong, or committing some other depredation of the
same sort. This offense brings about a right of life or death over the
slave who commits it, on the part of the injured party. In practice,
according to the accepted custom, this slave automatically becomes

513 No one has a bed except the aménokal, who owns one of the Hausa
[352 type; this model has also been adopted in a certain number /227/
177 of Kel Oui /Owey/ camps. (1) The man and woman each sleep on
643]

1. Contrary to what has been said, the bed is not Tuareg but Hausa. Its use is spread among the sedentary people of Aïr, Damergou, and Sokoto, and it is made by Hausa smiths.

his or her own side of the tent, the boys with their father and the girls with their mother.

654 There are no cradles for babies among the Ahaggar Tuareg, and young children are placed on a skin or on blankets. Sometimes a hemispheric wicker frame is put over them and covered with a cloth to cut off the light or protect them from sandstorms.

The Kel Aïr and the Tenguéréguif have little cradles which are suspended from the top of the tent.

354 Fire. -- In front of each tent there is a hearth, generally made of three stones. It is not intended for cooking purposes, but rather for warmth in the evening after the sun has gone down when all the people gather in the shelter of the asaber, which is unrolled in an arc in front of the tent. The flame warms up hearts and
[272] bodies and synthesizes family and friendship. Sometimes a container of water is placed on the three stones to heat in order to make tea.

343 The cooking fire is set apart, generally some three or four
354 meters from the tent, in the shelter of a little stone wall in order to protect it from the wind.

372 We have not been able to find any myth on the origin of fire
773 among the Tuareg. According to them it was created by God, who gave it to man to cook food. Iblis (Satan) wanted to seize the secret of how it was made, and God punished him by creating

To make up this deficiency in graminaceae, the Tuareg have recourse to products of gathering.

After a rain the captives and the Imrad women gather the seeds of certain plants which grow in the Ahaggar valleys. They are the afasso (Panicum turgidum F.) and the oulloul (Aristida pungens D.). But the size of the yield varies with the abundance of rain, and one may say that most of the time it is quite /233/ uncertain. This is not the case in the Sudan, where the Iklan gather whole bags of wild seeds, particularly cram-cram (Cenchrus echinatus), every year.

Fig. 31. Little leather flask used as a butter container.

To be sure, there are a few wild berries in the Ahaggar, such as those from the jujube tree (Zizyphus lotus D.) and the téborak (Balanites aegyptiaca). In case of famine the Tuareg fall back on other seeds, such as those of the colocynth, the Acacia tortillis, etc. However, all these plants play only a secondary role in the Tuareg diet.

The Tuareg have at their disposal milk from their camels, goats, and ewes. They drink it either whole or diluted with water, either fresh or sour.

The luxury of drinking whole milk is reserved for young mothers and children. Adults generally drink fresh milk morning and

[264]
272 evening after the milking, and at the noon meal they drink milk which has already soured. It may accompany the dishes /234/ of [262] béchena, serve as a sauce, and also be taken as a drink. When they make long moves, the Tuareg carry a bag full of skim milk on their camels. This turns rapidly and gives a sour-tasting whey which is very refreshing. But milk is particularly appreciated for its by-products, butter and cheese.

234 Butter -- oudi -- is obtained by churning milk in a [415 237] little leather bag; a woman shakes it on her knees, making it swing from right to left and from left to right. [237 415] The butter collected is placed inside a sheep's horn which serves as a receptacle. When butter production exceeds daily consumption, the butter is placed in leather containers, in the shape of a flask, where the heat usually keeps it liquid or very fluid, except in winter when it is necessary to heat it to get it out of the container.

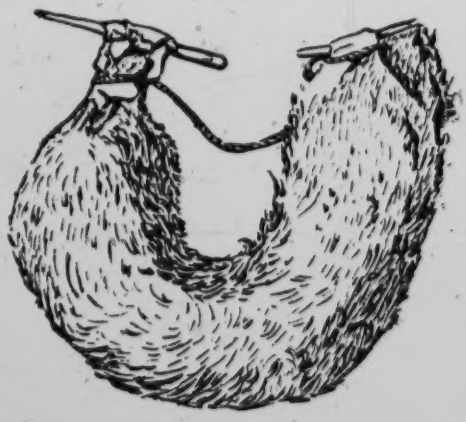

Fig. 32. Butter container made from the skin of a camel's neck.

262 Butter is mainly eaten as a sauce; béchena gruel or wheat cakes are moistened with it. The Tuareg never cook it, as in fried foods.

231 In years when pasturage is particularly good, which assures an abundance of milk from the animals, the Tuareg make cheese -- tikomaren. They sour the milk, squeeze the curds in little mats

264 [415] The Tuareg use spoons. The use of this implement is peculiar to them, for their Arab or Negro neighbors eat with their hands. The custom must be related to the wearing of the veil, which they [182 291] do not take off to eat and which prevents them from putting their hands full of food to their mouths. They carry food to their mouths while slightly holding up the ends of their veils.

[271] For beverages they drink only water, whether it is clean or 272 polluted, and milk.

For half a century they have had the habit of drinking green tea in the Arab manner; they aromatize it with mint or some perfumed plants of the Ahaggar, /238/ chih (Artemisia herba alba) in particular. Coffee, which was formerly much used by them, is now [757 778] taken mainly as a medication to calm violent coughs or stomach aches.

276 If we now seek consumer goods taken as stimulants or narcotics, we see that the Tuareg know only tobacco, which they chew or take as snuff.

[177] Smoking is not one of their customs. The young men who are in contact with the French like to beg a cigarette, but it is simply in the spirit of imitation.

114 276 Duveyrier, however, has said that the Tuareg smoke. Was this, perhaps, the fashion among the Tuareg who visited Ghat? Before him Barth wrote that all riverain people living along the Niger loved to smoke. "It is very seldom that they leave their pretty little clay pipes, and all the Rouma, like the Tuareg, cover their mouths when smoking, so that all one sees is a pipe bowl coming out of the shawl which covers the face." (1)

1. Voyage en Afrique, vol. IV, p. 137.

136 several different spots, and it is not impossible that the species [172] bred today in the Ahaggar is of African origin. Bones of the species are found in the Neolithic layers of the Sahara.

137 At the present time there is a death struggle between the goats 233 and trees in the Ahaggar. The goat itself is capable of browsing 185 the lower branches and destroying them, thanks to its agility. The Tuareg do the rest when pasture is scarce, by felling the main branches to put them within the reach of the animals. And so, in a relatively short time, trees, and the tahla (Acacia sp.) in par-particular, will be only a memory in the Ahaggar. Nothing has

[412 326 172]

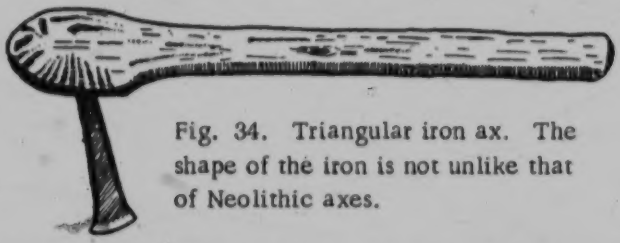

Fig. 34. Triangular iron ax. The shape of the iron is not unlike that of Neolithic axes.

been done by the French administration in the Ahaggar to protect the trees, when it would be sufficient to close some valleys for several years, while taking into account the needs of the shepherds. Measures of this kind have been taken in the environs of Goundam and have given very good results.

132 Prolonged dryness which causes a lack of pasture often puts 233 goat raising in difficulties. The birth rate is stopped short, and mortality may result to such a great extent that the number of animals sometimes falls to one fifth. Then many years are needed to build up the flocks, granting, of course, the arrival of favorable rains.

232 The careless and fatalistic Iḥaggaren do not even try to step up breeding by buying sires in Adrar or in A'ïr. They let their weak flocks reconstitute themselves by their own means, which [272] sometimes requires many years. In case of an overabundance of births, they limit the number of animals, for they are well aware

of the average resources of their country and never let their flocks exceed the number of head necessary for the milk needs of their family -- about ten to twelve animals per person. The surplus is consumed or sold to the sedentary people in the agricultural centers.

/253/ The Ahaggar goats give very rich milk which makes excellent butter. The meat, which is a little tough, is eaten boiled, and the hide is valued for making saddle bags, waterskins, and sometimes tents.

The ass. -- The Ahaggar Tuareg have many asses. They do not breed them properly speaking, taking no care of them and letting them reproduce freely. Many Tuareg do not know the exact number of asses they have, for they do not use them all and abandon them in the mountains where they become more or less wild. The young ones, born in the meantime, do not let anyone get near them, and they must be trapped and then trained in order to be used. These asses running loose, called haoulil by the Ahaggar Tuareg, have given rise to a legend of wild asses. On this subject, Gautier cited the adventure of General Laperrine who had a "wild" ass hunted by his Arab horsemen, only to notice later that the animal had been castrated.

Although there are no more wild asses in the Ahaggar, it is nearly certain that there were some. They were pictured in the rock drawings of the Djorat wadi, and some still exist in Abyssinia where they are called "onager."

The ass is very much at home in the Ahaggar. It is possible that it was domesticated there. The legends of the Ihaggaren have kept the memory of the first inhabitants, the Issebéten, who had only asses and goats.

In their short moves the Tuareg utilize asses to transport baggage, and men and women also use them as mounts. The servants also take asses to replenish the water supply, making them carry the heavy waterskins on their backs or under their bellies.

484 This was observed by Duveyrier, Captain de Bonnemain, and
674 Bou Derba on the Ouargla-Ghat itinerary. We have witnessed
similar actions ourselves, but the goods stored in this way belonged
[609] to some Ihaggaren, and no one would have dared lay a hand on
them. The thing is less safe in the case of a stranger's property.

When a camel dies en route, the load that it was carrying is left on the spot and put under public protection. The caravaneer is always certain to find his property, even six or eight months later. In this regard, it is well to say that the Tuareg, raiders though they must be, are not thieves. When a theft has been committed in their /316/ country, the guilty party is generally a Negro, but rarely a Tuareg of the white race.

439 What were the products transported? Manufactured goods, for the most part, generally made in Europe. There were fabrics and silks which the Tuareg and the Sudanese eagerly sought, and there
[177 272] were knickknacks, unmounted sword blades, sugar, and coffee (tea only recently made its appearance in the Sahara).

All these goods were resold or exchanged for ten times their value. On the return trip the caravaneers brought back ostrich plumes, gold dust, ivory, and little Negro girls and boys bought as slaves and resold for very high prices in the cities of Algeria. Leather was also the object of an intensive traffic, as well as medications of plant or animal (ostrich fat) origin which were part of the Sudanese pharmacopoeia and much appreciated by the Arabs.

177 Today, except for gold and ivory, which have become rare
439 and whose traffic is in the hands of Europeans, and except for the sale of slaves, which has been forbidden since the French
[486] occupation, trade has remained the same. But the routes have become free and the Tuareg can no longer count on their former profits. There was one resort left, that of making themselves caravaneers in their turn and using their many camels in that way. This is what they have done.

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[539]

"Tamott tekness
"Ehere iouof
"Talhett ter'tess
"Tir'irt touoss"

which means:

The woman who argues.
Flocks that scatter.
The she-ass that breaks her tether.
The pot that tips over.

In a joking way, to be a real wit, the man could answer: "If I should find myself in this situation, I would first gather the flock, I would re-tether the ass, I would put the pot back on the fire, and only then would I pay attention to the woman, " and there would be a chorus of indignant protests.

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832

The woman makes it a point of honor to have as many admirers as possible. This is a proof that she is pretty and will not have trouble in getting married.

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The ahal, begun after sunset, lasts quite late into the night, and the pale light that is shed by the stars allows shamelessness to have free rein. Although the married women joke and take part in the games, they behave themselves comparatively well. The others, however, may sit on the knees of their admirers. They kiss, but in a special way. Since the man must never uncover his mouth, he lowers his veil under his nose, and he piously smells the nose! of his loved one, who herself may kiss him. Even intimate handling (proh pudor! /oh, shame/) is allowed, which is never seen among the Arabs.

[201]

During these gatherings, when the amz'ad is played, it is listened to with great pleasure. This instrument has a way of exciting /10/ the Tuareg, who utter "Ouh! ouh!" as a sign of pleasure. They have even made a verb of it: isouhouh.

[272]

But now is the time when the camels come from the pasture. They must be milked: that is the az'ouz'edj 'ǐ' ## ## (from ez'edj 'ǐ' ## , to milk). The women get up, and those present are given milk to drink. They will have to disperse.

The nobles eat better, at least those who are well-to-do. In the Ahaggar especially they own cultivated land in the "ar'erems" (villages), where they grow wheat, "ired," barley, "timzin," and bechna, "inelli"; but usually they sell their

Dautheville

Trees Called "Ahatés" (Acacia Albida) at the Tillemas of the Tessht Wadi (Koudia).

wheat and barley to the natives of the Tidikelt and are content with bechna, of which they are very fond. They claim that bechna is less heating to the stomach than wheat or barley.

The rich allow themselves the luxury of drinking tea, but tea and sugar are very expensive, and they do not misuse them. On the other hand, they do not hesitate to beg for them shamelessly.

When the year is bad anything seems good to the poor to assure their subsistence. In such years one sees them eating /30/ "berdi," or "taheli," (Typha angustifolia, Typhaceae); ground carob seeds of "talhas," or gum trees, which they call "tahaha" • ⁝ ⁝ + ; "tanékfaït (Diplotaxis duveyrierana, Cruciferae); fruit of the "teborak" (Balanites aegyptica), which they steep to take out the bitterness; and even leaves of the "aremmas" (Atriplex halimus, Salsolaceae), which they boil.

In short, nature keeps food resources for them which prevents even the poorest from dying of hunger.

252/104 cont./ cooking is determined by the pleasing odor that comes from the dish. This grain is next ground together with dried dates. The powder thus obtained is eaten without further preparation.

The "arahara" has a more complicated recipe: crush the millet so that a very fine flour is obtained, crush some dates, and add a little water to form a paste, crush some "tikamarin" /cheese/; mix flour, date paste, and cheese powder together; add a lot of water until you have a liquid resembling milk. Drink cool in summer.

"Asink" is the Tuareg national dish: crush millet so that you have half of it in fine flour and the other half in coarse grains; separate the grains from the flour and pour the former in a pot of boiling water; cook for two hours until the bloated grains form a rather liquid gruel; pour the flour into the gruel, stirring the mixture with the "esseroui" (a wooden paddle used especially for the asink) with the pot still on the fire; obtain a rather thick consistency, dish into the tarahout, add milk if possible, and serve hot. When there is no milk, butter may be added, or the asink may be eaten as is.

[272] /105/ Milk, another basic food, is drunk whole as soon as it is drawn, or is mixed with sour milk, or blended with whey. To make butter, milk is poured into an "adjiouer" (the "chekoua" of the Arabs) and sits for a day, preferably in the sun, causing it to sour rapidly. The sour milk is then poured into another chekoua, which is stirred until a ball of butter is obtained. The sour whey left in the chekoua is drunk during the day.

[262] Fresh butter ("zebda" in Arabic) is called "white butter" (in Tamashek: "oudi oua amellen"); it is soon eaten, but only a small amount. Most of the product is transformed into "dahan" (Arabic -- in Tamashek: "oudi"), which can be kept a long time. White butter, with a small quantity of dates added, together with a few grains of wheat or millet and

262 /107 cont./ buy them. Rice is considered to be a remedy. In the way of preserved foods, one may see the Tuareg eat sardines in oil and jam and use canned milk. All of these foods are not accepted with enthusiasm; they are too expensive,
[181] and the Tuareg seem to be truly conservative in food matters, as well as in the whole of their customs.

They drink water, milk, and tea, the latter being of
•272 relatively recent importation but in the way of becoming a necessity. There is no need to mention again the ritual that surrounds the making and drinking of tea.

Coffee is scarcely drunk except with the French; when it
[273] is taken in the tent, it is as a remedy. Need I say that the Tuareg drink no alcohol and that at the present time there is no exception ot this rule?

Public Health

It appears to be practically impossible to construct a
161 demographic table for the Ahaggar: figures for the years /108/ before 1947 are rare and suspect; they give an acceptable approximation but do not give an exact picture of population movements.

In this field one must then use figures from recent censuses and observations of the tribes that may be easily visited in trying prudently to project these observations to the whole of the population.

In 1948 the count was:

6, 048	nomads
4, 240	harratin
10, 288	

1949

6, 013	nomads
4, 285	harratin
10, 298	

The population figure for the Ahaggar seems to be fairly stationary (even if one does not rely exclusively on the figures

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

*233 128 [172] their flocks, but it is, on the whole, inproper to show any interest in their animals. Some nomads will even claim that although they know all their goats by sight, they do not know, or never mention, the total number of their animals, as this is believed to bring bad luck. This belief is probably explained by the idea of the evil eye. To this may be added that it is difficult to judge the ownership of goats by merely watching the flock of a household which may also have animals grazing on other pastures.

*233 According to official statistics for 1948, the average number of goats per household among the *Kel Ahaggar* is fifteen (Capot-Rey 1953a, p. 265). This figure is probably derived from the tax lists, and it seems to be much too low – even when households of slaves and sedentary agriculturists are included. Lhote has stated that the number of goats per person, under ideal conditions, is 35–40. If they increase above this, the surplus is slaughtered or sold to the sedentary peoples of the oases (Lhote 1951a, p. 9). This latter figure for ownership of goats under ideal conditions is probably true for the more wealthy Tuareg of Ahaggar. Thus among the vassal Tuareg of the *Dag Rali* tribe many households are said to possess 100–200 goats, but this tribe is considered extremely rich in goats, and households of other tribes will not generally own so many animals. From rough calculations made in a great many camps of vassal Tuareg, and Tuareg of the *Isekkemaren* class, I estimate that households on an average possess 60–70 goats when pastures are not too badly developed, for it must be emphasized that the size of flocks changes with climatic conditions. For the sedentary agriculturists of Ahaggar I estimate, on the basis of calculations made at Amsel, Abalessa, and Tarhawhawt, that a household possesses on average 15–20 goats.

*233 565

234 In good years the amount of milk products supplied by a flock of 60 goats is rather considerable. This is clear when we consider the fact that a goat, during the period of three to four months in autumn and early winter when pasture of annual plants is green, will yield up to two litres of milk every day. When annual pasture gets dry the milk yield decreases but milk is still comparatively plentiful and important for food all the winter. In summer, however, there is little milk for reasons already referred to, and in dry years goats, even in the cold season, yield little or no milk. The flocks decrease during such periods of drought and some nomads may even lose most of their animals. During my stay among the Tuareg of Ahnet and Ahaggar from November 1954 to April 1955, goats suffered much from lack of fodder. In many camps one or two goats died of hunger every day.

[272]

*233

*233 731 The Ahaggar Tuareg cannot subsist entirely on goat-breeding because severe droughts occur frequently in their country. During drought-periods the goats are so to speak valueless as subsistence for the nomads. But it is remarkable that goats emaciated in consequence of severe drought quickly grow fat and start to yield milk once rain has fallen abundantly enough for the regeneration of pastures. In connection with this we shall point to another characteristic of goat-breeding: The animals have a very short gestation period, and the kids are fully grown for mating in one year. And as one goat may have four kids annually with free mating, a household, which has lost most animals during a drought, will be able very quickly to re-establish a flock large enough for its needs.

*233 Goats are also highly important for the subsistence of the pastoral Tuareg of Ayr. I do not know of any statistic material about the size of flocks in this area, but for Tuareg of Kidal (Adraɾ-n-Foras) flocks are officially estimated at 74 goats and sheep per household (Capot-Rey 1953a, p. 269), and this region is environmentally related to Southern Ayr. The *Kel Ferwan* Tuareg say that a household

[Text continues on p. 45]

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Fig. 36. Two Ayr Tuareg milking a she-camel with the colour name *tawinak*. Ayr, the *Imezzureg* tribe.

They draw out the placenta (in Ayr known as *t'imidin*) by the attachment of a heavy stone to the membrane (*abayor*). It is also common a few hours after birth to draw a little milk from the mother camel and pour this milk into the calf's mouth in order that the new-born animal may be able to stand upright and suck its mother quickly. When this has been done it is normal to bleed the mother-camel. Some milk drawn on the day a she-camel has borne a calf is frequently consumed by the Tuareg (cf. *éderes*, p. 221), but with this exception the new-born calf is allowed to drink all its mother's milk for the first days after birth. The period during which the calf sucks freely varies. It depends on the yield of the mother-camel and is also determined by the amount of milk available to the owners from other animals. Milking may exceptionally start already four or five days after birth, but this is not normal. The calf is frequently allowed all milk for a fortnight, or even for a whole month. In Ahaggar when pastures are very dry it is quite normal not to milk a mother-camel at all for a still longer period.

233* [272] [234]

The entire suckling period, that is the period in which the calf is allowed to drink part of its mother's milk, including the short period when it sucks freely, also varies. But here there is one main rule: a calf is allowed to suck as long as its mother-camel is milked, for she-camels, like cows, do not generally yield milk unless they have their calves close to them. It is normal to mate a she-camel about one year after the birth of a calf. She will then yield milk for about six months after mating, so that the total suckling period is about 18 months, at the end of which period the calf will be allowed very little milk. If a she-camel is not mated so soon it may yield milk for a longer period, and the suckling period may even be up to about two years when the calf is a grown animal almost as big as its mother.

233* 234

There are various methods to secure milking in case a camel has lost its calf. The dead calf may be substituted by another calf, but the dummy-calf is also used with she-camels. This device is known as *ahayoy* (Ahaggar), or *azeyuz* (Ayr). Both in Ahaggar and in Ayr it is claimed that some she-camels can be milked without their calves if their udder is patted in a particular way with the hands – which treatment is known to the Ayr Tuareg by the name *ewlewl*. The method of blowing into the vagina described above for cows (p. 51) is never employed with she-camels. But there is another method for

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[text continues on p. 59]

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bridge of the nose of a calf, so that it hurts its mother when it tries to suck (Cauvet 1925, I, p. 359). – (3) *akimbab*, that is a plaited muzzle which allows the calf to graze, but prevents it from sucking. I have been told both in Ahaggar and Ayr that such muzzles are used for camel calves, but apparently they do not constitute a normal weaning method. – (4) *aisdrez* or *ameru* are said to be synonymous terms for the weaning method generally adopted among the *Kel Ferwan* Tuareg of Ayr. The method is as follows:— The upper lip of the calf is pierced on both sides of the harelip so characteristic of all camels. A piece of thin root of the *afagag* acacia (*Acacia Raddiana*) is drawn through these holes so that the ends of the root protude at both sides, and a knot is made at both ends that the root will not fall out. These knots hurt the udder of a she-camel when the calf starts to suck, but this is not the real idea of the device. For the root-piece keeps the pierced holes open and the calf is therefore unable to suck at all.

A she-camel may yield about ten litres of milk at the beginning of its lactation period, but at the end of this period it does not yield more than two or three litres even with good grazing. The yield is always dependent on grazing conditions. Thus during my stay in Ahnet and Ahaggar 1954–55, a Tuareg who owned about twenty she-camels acquired only two litres of milk a day in all from these animals. But conditions of camel-breeding are much better in Ayr and in the southern plains where she-camels are tolerably good milk-yielders most of the year, and camel's milk is therefore very important to some pastoralists of these regions. Camel's milk is drunk and not generally used for food in other ways. It is much esteemed by all Tuareg, who claim that it possesses a particular power and gives strength. It is never stored in the shape of butter or cheese. The Tuareg of Ahaggar and Ayr never eat camel's butter which they consider possesses a poor taste, and, besides, it is very difficult to churn. They make butter of camel's milk only when butter of milk from other domestic animals is lacking for the greasing of the hair. Both in Ahaggar and in Ayr butter is then churned by the men in a rather peculiar way:— A skin bag containing an amount of camel's milk is attached to the riding saddle of a camel which is then ridden at very fast speed for some time. But even with this method, it is said, camel's milk gives very little butter, and it is also definitely stated that the milk cannot be used for cheese-making. These Tuareg statements seem to be confirmed by analyses of veterinaries, who claim camel's milk to contain very little casein, and it has been proved difficult to separate butter from camel's milk (cf. Cauvet 1925, I, p. 707 ff.).

She-camels can mate and yield milk until an age of about 25, and their average length of life is estimated by the Tuareg at about 30 years. But pastoral Tuareg do not generally keep their camels until they die a natural death. In Ayr I was told that she-camels more than twenty years old should be sold or killed. Most Tuareg sell their old camels in the oases of the Central or Northern Sahara where a large population of sedentary farmers is constantly yearning for meat. Very few camels are killed by the butchers of Agadez, where meat from oxen, sheep, and goats is always available and fairly cheap, but a great many old camels are slaughtered at the market places of the oases further north.

Pastoral Tuareg of Ayr very rarely kill their own camels to eat them. They will slaughter a camel which suffers from some severe disease as all animals dying by accident or from disease are unlawful to eat. However, there are also some Ayr Tuareg who will never eat camel's meat. They say that they would feel very sick at heart were they to do so, and some Tuareg even say that they would vomit

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Religious beliefs also interfere with Tuareg stock-breeding and create usages of an irrational kind. Thus the Tuareg, like other North African peoples, firmly believe in the mystic benevolent power, or benediction, known as *elbaraka*. This is a power that emenates from God. It is given by God to man and it cannot act unless certain taboos, or rather religious prescriptions, are followed. The benediction *elbaraka* is more than anything else hurt by impurity. Cleanness is an absolute necessity for this good force to be sustained in the same way that a man cannot approach God through prayer if he be unclean. Women are considered unclean during their periods of menstruation and cannot, therefore, then pray to God. They are also forbidden to drink the milk of domestic animals which have very young kids, lambs, or calves, and they must not drink water which has been conserved in newly-made skin-bags. These taboos are maintained in order not to hurt the benediction given the animals by bringing it into contact with impurity. For the same reason milk taken from animals which have recently brought forth young should not be given to strangers – they might be unclean and harm the *elbaraka*. It is also believed that soil is an impurity dangerous to *elbaraka*, and milk must never be spilt on the ground. Even when milk-bowls are cleaned with water, this liquid should be poured out upon plants or stones, and never be spilt on the ground. Should this be done, God will withdraw his *elbaraka* and the result will be severe periods of drought without milk. I have frequently heard Tuareg ascribe the lack of rain and the dry pasture – the lack of *elbaraka* – to the fact that somebody had spilt milk upon the ground. This had caused God to be angry and to withdraw his benediction. Some Tuareg have also said that *elbaraka* is harmed by a person who blows upon milk. When a man drinks milk he must not blow away impurities before drinking but must remove them by means of a piece of straw.

In the two groups of Northern Tuareg and also in Ayr it is considered very disgraceful for a person who watches the animals away from camp to drink milk directly from an animal's udder. Some Tuareg say that a man when staying alone among milk-yielding animals should not utilize their milk even if he performs milking in the usual way. A person who breaks these rules is called *émenkes* or *émelded* among the Ahaggar Tuareg, *émelded* in Ayr. The Tuareg say that there are some people, and in particular many slaves, who do not follow this rule, and that they are despised if known to have broken it. When two or more people are alone with a herd or flock away from the camp they can freely utilize the animals' milk. And it is very normal for camel herdsmen to live with a herd of she-camels in isolated places for long periods. They then live almost exclusively on camel's milk taken from the herd they guard.

Certain usages connected with stock-breeding are rationally explained by the Tuareg. Thus when they heat milk by means of hot stones (cf. p. 221) put into the milking bowl, they claim that this is done in order that the milk shall not get dirty as would happen were it heated in an ordinary cooking pot. Another custom which by other stock-breeders has been explained as being based upon magic, namely the usage not to drink milk and eat meat at the same time, is also rationally explained by the Tuareg. They say that there is no taboo on taking these kinds of food together, but it is very unwise to do so because the mixture will act as a laxative and upset the stomach. Therefore, if a Tuareg has drunk much milk he will not eat meat shortly afterwards, and if he has eaten meat he will not take milk for some hours, though he may do so should ample water have been added to the milk. The Tuareg to my knowledge have no other special customs in connection with stock-breeding and milk than there mentioned

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Fig. 98. A slave watering goats by means of the leather bucket called *aǧa*. Water is drawn from a well and poured out into a hole dug in the clayey ground. The goat standing to the left is sheared – a token of the summer season. Tasilé-n-Ajjer.

conditions, and herdsmen, who live with camelherds far away from camps and wells subsisting on camel's milk, do not consider water necessary. Should domestic animals have eaten salt or salty plants they are very eager for water even in winter. When I lived in Ahaggar with my camels during the winter 1954/55 they had rightly to be watered every ten days, but in regions where they fed mainly on saliferous plants they had to be watered more frequently. However, domestic animals must not be watered too often as this would make them slow and emaciated, and a camel must not be worked too hard the day after it has been watered.

Tuareg camps are always found around wells, pools, or other types of water places for which there is a large vocabulary. But the Tuareg never camp too close to water places where there is little pasture, many foreigners and consequently little peace. The distance from camp to water place varies, but is very frequently 1–3 kilometres. During the rainy season (*akasa*) water is very aundant all over Ayr, but outside this period conditions of water supply for human beings and livestock are more favourable in the north than in Ayr, where water most of the year must be drawn from wells. To raise water the Tuareg use a leather bucket known to the Ahaggar Tuareg as *aǧa* (Fig. 97–98). The water drawn for the animals is poured out into a hole dug in clayey soil, or into a hole covered with a piece of skin or leather known in Ahaggar as *tafarawt*. This skin is nowadays frequently substituted by canvas (cf. Fig. 99). Where water is scarce and must be drawn from narrow wells, as in Ayr during the summer season, the watering of flocks and herds gives rise to frequent quarrels between pastoralists. For though the right to the use of wells is free to all there are many disputes and fights frequently

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abellenǧaḍ (*Reseda villosa*). Tr., L.M., U.M. Seeds of this plant are edible, but of bad taste – according to Foucauld 1951–52, I, p. 65.

abser (*Acacia Raddiana*). Tr., (L.M.). Fruits are collected mainly for goat fodder, but are eaten by human beings when vegetable food is scarce. The fruit is then crushed into flour. The resin of this acacia is also edible.

tamat (*Acacia seyal*). Tr. The resin (*taynwst*) is edible. I believe it is used mainly as a remedy against stomachache. This is perhaps also true of the resin of the *abser*-acacia mentioned above.

ahtes (*Acacia albida*). Tr., L.M. "La gousse est même comestible pour l'homme" (Maire 1933, p. 120).

ténefé (*Tephrosia leptostachya*). Tr. "Les Touareg mélangent cette plante desséchée au thé vert" (Maire 1933, p. 125).

laǧul (*Alhagi maurorum*). Unknown in Ahaggar, but found in Tasilé-n-Ajjer. "Les racines tuberisées sont mangées par les indigènes (Killian)" (Maire 1933, p. 131).

alora (*Peganum Harmala*). Tr., L.M., U.M. An annual seed-plant. Seeds are used for *tébik*.

taburaḳ (*Balanites aegyptiaca*). Tr., L.M. A tree having edible fruits which are macerated in water to remove the bitter taste.

tedjoq (spelling according to Maire 1933, p. 241) (*Pistacia atlantica*). L.M. Very rare according to Maire (1933, p. 148). According to my own observations the fruit of this tree is eaten by Arab pastoralists (e.g., *Ulad Nail*) of the so-called *daya* region south of the Sahara Atlas. It is possible that it is also eaten by the Tuareg.

tahunek (*Rhux oxyacantha*). Tr., L.M. A tree having edible fruit.

téhaḳ (*Salvadora persica*). Tr. A tree with edible fruit.

tabakat (*Ziziphus lotus* var. *Saharae*). Tr. The berries are crushed and mixed with millet flour.

ăzawa (*Tamarix gallica*). Tr., L.M. "La manne produits par ces arbres est receuillié par les indigènes qui l'emploient comme matière sucrante. (Voinot)" (Maire 1933, p. 156).

tabarekkat (*Tamarix aphylla*). Tr. "Les rameaux mannifères sont employés pour sucrer l'eau" (Maire 1933, p. 159).

tafeltast (*Myrtus Nivellii*). (Tr.), L.M. "Les rameaux de ce Myrte sont récoltés par les Touareg, desséchés et exportés par sac entiers au Soudan et au Mzab, avec *l'Artemisia judaica* ssp. *sahariensis*. Ces deux plantes sont utilisées comme médicaments et comme condiments" (Maire 1933, p. 162).

awkal (*Cynomorium coccineum*). Tr., L.M. A plant yielding edible roots which are dried and ground into flour (cf. Maire 1933, p. 163).

aséyar (*Anethum graveolens*). (Tr.), L.M., U.M. An annual plant. Its seeds are used as a spice and for adding to tea.

takmezzut (*Teucrium Polium*). Tr., L.M. An annual plant used for adding to tea.

élel (*Nerium Oleander*). Tr., L.M. This plant is extremely venomous particularly so for camels, which die from eating its leaves. "La cendre de bois de *Nerium* est employée par les femmes du Tidikelt pour se faire engraisser. A cet effet elles mélangent un peu de cette cendre avec des dattes pilées et du beurre, puis absorbent ce mélange dans du leben" (Maire 1933, p. 170).

ǧellachchem (*Solenostemma oleifoleum*). Tr. A perennial plant. Its leaves are used as a substitute for tea.

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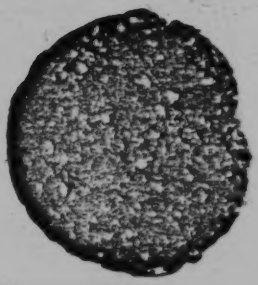

Fig. 126. A cheese-like mass of *edamam* berries (*Osyris alba*). The fresh berries are pounded in the large mortar (*tindé*) or are crushed between two stones to be formed into pieces of cheese form to be dried. This cheese-like mass of *edamam* berries is used by Tuareg women as a kind of face ointment against sun burn, pimples, and the like. They apply this ointment to the face as follows:— A little milk is poured upon a stone, the cheese-like mass of berries is rubbed against it, and the mixture of milk and berries is thereupon rubbed into the skin of the face with the fingers. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.075 m. (N.M. G. 5279a).

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262 *enag* (*Leptadenia pyrotechnica*). Tr. A tree with edible fruit.

[272] *tañhart* (*Mentha longifolia*). Tr., L.M. An annual plant. Used as an aromatic for adding to tea.

awit, generally known by the collective name *awihat* (*Salvia Chudaei*). Tr., (L.M.). An annual plant used as an aromatic for tea.

[824] [482] *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*). Tr. This plant is extremely venomous for human beings, though not for animals. In the past it was used by the Tuareg as a poison for enemies. Members of La Mission Flatters (1880–81) were poisoned by the Tuareg using poison of this plant inserted into dates presented to the expedition. "La plante, absorbée à petite dose, aurait la propriété de faire engraisser. Les femmes du Tidikelt l'emploient dans ce but, en en faisant cuire une petite quantité dans de l'eau avec de la farine et de la graisse; elles laissent réduire et absorbent la bouillie obtenue, puis se couvrent pour transpirer (Voinot)" (Maire 1933, p. 192).

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252 *ahahel* (*Cistanche Phelypaea*). Tr., L.M. A plant yielding edible roots. After drying the roots are pounded in a large millet mortar to be used for bread which is much esteemed by the Tuareg. "Cette plante est recoltée jeune par les indigènes, puis placée dans le sable sous une couche de *drinn* (*Aristida pungens*) jusqu'à noircissement et dessication. Le produit sec est moulu et utilisé dans l'alimentation (Voinot)" (Maire 1933, p. 196).

éfetekchi (*Orobanche aegyptiaca* & *O. cernua*). Tr., L.M. A plant yielding edible roots.

tanzellit (*Orobanche sp.*). Tr. Very rare. A plant yielding edible roots.

teɣellet (*Colocynthis vulgaris*). Tr. Seeds are eaten after boiling and drying.

alkeɣ (*Cucumis pustulatus*). Tr. Rare. Seeds are eaten after boiling and drying.

[263] *takkilt* (*Cotula cinerea*). Tr. "Les Touareg utilisent cette plante comme condiment, principalement pour la viande qui commence à se gâter" (Maire 1933, p. 209).

[439] *téhéréɣɣelé* (*Artemisia judaica* ssp. *saharíensis*). Tr., (L.M.). "Cette plante, comme le *Myrtus Nivellei*, est récoltée en grande quantité, séchée et exportée au Soudan, où elle est employée comme aromate et condiment" (Maire 1933, p. 212).

[272] *zézzeré* (*Artemisia herba alba*). (Tr.), L.M. Used as an aromatic for adding to tea.

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up with small strips of fat. The pieces of liver covered with fat are put on a slender iron or wooden rod to be roasted slightly over the fire. This dish is known to all Tuareg by the Arabic word *chiefig*. It was introduced among the Northern Tuareg by the Arabs, but is not widely known among the Ayr Tuareg.

This brief description of Tuareg meat preparation can adequately be supplemented by a reference to two peculiar dishes:— (1) A dish known to the Ahaggar Tuareg as *taiebeggat*. It consists of meat which after boiling or roasting is pounded in a large mortar and frequently served with liquid butter. This dish is also known to the Ayr Tuareg. (2) A dish which is described from Ahaggar by Foucauld under the name *aboujor*. It consists of untanned skin which is eaten in case of hunger after the following preparation:— Untanned skin from household implements, shields, and the like is roasted under the ashes, and is thereupon pounded into small pieces. These are eaten without any further preparation, or after boiling. (Foucauld 1951–52, I, p. 73).

Like other North African peoples the Tuareg dry meat of domestic animals and of game. The people of Ayr know three distinct drying methods, namely (1) *iwesan*, that is meat which is boiled until it is free of blood; it is dried in the shade; (2) *tikelsin*, uncooked meat cut into pieces to be dried on a string in the shade; (3) *kules*, uncooked meat cut into strips which are dried for some time to be treated with salt and various spices. This last method is not practised among the Tuareg of Ayr, but by sedentary people of Agadez and by Negroes further south in Damergu. The Ahaggar Tuareg generally boil or roast the meat before drying; meat roasted in the ashes according to the *abatul* method and thereupon dried is known as *takasa*. I do not know whether the Ahaggar Tuareg also practise the method of drying raw meat like the Ayr Tuareg, but the dried *agezzeram* lizzards which they take to Tidikelt on trading expeditions, are dried uncooked. Furthermore, the method of drying raw meat is known elsewhere in the Northern Sahara, and I have myself seen it practised among the Berber-speaking *Chawiya* of Aurès.

I conclude the description of Tuareg meat preparation with a brief note on the use of blood of living

Fig. 166. Wooden double-vessel (*azar*) to contain water and butter for greasing the hair. Similar containers with a third vessel for fine-grained sand are also found among the Tuareg. Made by blacksmith from wood of the *taburak* tree (*Balanites aegyptiaca*). Geometrical ornaments are produced by burning with a hot iron. Ahaggar, *Ahl Azzi* Arabs at Tamanrasset. Dimension: 0.241 m long. (N.M. G. 5880).

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camels. This blood never constitutes a proper dish to the Tuareg. They bleed camels to drink their blood only when they lack water on journeys in the desert. Bleeding is done according to the method described above, and the blood is collected in a drinking bowl. But the Ayr Tuareg say that they work up the mass of blood with the fingers with the result that the upper part of the amount of blood becomes more liquid, though it is always red in colour.

The Tuareg use the following implements to make cereals or other vegetable products into flour:—

(1) A large wooden mortar (*tindé*) with a heavy pestle (*éheṛen*) (Fig. 177). It is used in all camps and villages of Ahaggar, Tasilé-n-Ajjer, and Ayr, and is in fact known all over Tuareg country. It is used mainly for pounding millet and sorghum, but it is also employed for pounding other cereals, including certain wild seeds, and for dates, cheese, meat, locusts, and the like. These large wooden mortars are manufactured by the blacksmiths of Southern Tuareg country, including Ayr, where most Northern Tuareg obtain their mortars. Among the Northern Tuareg there are also other mortar types. A small mortar which like the former rests on a foot and is known by the same name (*tindé*) (Fig. 178), is used mainly by sedentary agriculturists for pounding rock-salt, dried tomatoes, tobacco for chewing, and other plants or materials to be used in small quantities. Another type of mortar without a foot and known to the Northern Tuareg as *akabar*, or *takabart*, (Fig. 176) is found mainly among pastoralists who use it on journeys for pounding millet.

(2) A saddle quern (*tehunt*) (Fig. 179), which consists of two natural and in general unfashioned stones, is found in most camps of the Northern Tuareg. This constitutes the only grinding implement for wheat, barley, and certain wild seeds among the *Kel Ajjer*. The stones used for saddle querns are sharpened at intervals with a hard stone or some other hard object (*tasettekut*) in order that they may grind effectively. A simple saddle quern (*asar*) is also known to the Ayr Tuareg, but it is less common there than in the north.

(3) The handmill (*tasirt*) (Fig. 181) is not a traditional implement of Tuareg culture. It is widely known all over Northern Africa both by Berbers and Arabs, by sedentary peoples and nomads living in black tents. It has been introduced to Ahaggar mainly by the immigration of the Arabic speaking Harratin (Iggaṛaṛen) of Tidikelt,

Fig. 169 a–c. Pieces of butter-milk cheese (*awiss*, pl. *iwissan*).
a. Ahaggar, *Harratin* of Abalessa. Dimension: 0.066–0.068 m in diameter, 0.022 m thick. (N.M. G. 5816).
b. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.062 × 0.022 m. (N.M. G. 5817b).
c. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.038 × 0.016 m. (N.M. G. 5817c).

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Fig. 194a–c. Bowl-like ladles from Ahaggar and Ayr. They are used mainly for eating liquid dishes – in particular for the dish known as *ayakura* (Ahaggar) or *ayalac* (Ayr).

a. Ladle (*tamaiat*) cut by blacksmith from wood of the *tabarak* tree (*Balanites aegyptiaca*). Ahaggar, blacksmiths of Abalessa. Dimension: 0.285 m long, 0.1[illegible]–0.120 m in diameter (the bowl). (N.M. G. 5845).

b. Ladle (*tamalat*). Ayr, Agadez. Dimension: 0.330 m long. (N.M. G. 6631).

c. Ladle-like bowl (*assay*) cut by blacksmith from wood of the *tabarak* tree (*Balanites aegyptiaca*). Ahaggar, *Ahl Azzi* Arabs of Tamanrasset. This ladle-like bowl was not used for food but for conservation of fine-grained sand used for hair-dressing together with water and butter. Dimension: 0.330 m long, 0.120 m in diameter (the bowl). (N.M. G. 5879).

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264 frequently consisting of bread or porridge eaten rather late at night. The Ayr Tuareg have related terms for these meals: (1) *tegingaut* which is a prepared meal eaten late in the morning. (2) *timekkelewt* which is the prepared meal taken at midday. (3) *temegint*, late evening meal which is the main meal in Ayr, as in Ahaggar. In addition to these meals there is a very light meal taken with tea immediately after rising. It is known as *eliaw*.

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[211] Incidentally there are Tuareg who do not have food enough to eat three times a day.

During times when Tuareg subsist exclusively on milk they have no regular meals. The amount [489] of milk needed to support life is very great, and it is drunk slowly during the day. On extensive journeys when the camels cross the barren deserts, the Tuareg also do not have regular meals as they do in their camps.

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[The use of milk as food has been marked for category 262; this is a major staple in the pastoral Tuareg diet.]